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OFFICE OF THE GOVERNOR

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# Governor Ehrlich Unveils New Hi-tech Transit System

***NEXT System Combines Latest Technology to Provide Better Customer Service and Safety***

BALTIMORE, MD (February 9, 2004) --- Kicking off his vision for the future of transportation in Maryland, Governor Robert L. Ehrlich, Jr., today unveiled a state-of-the-art computer system that will use the latest in technology to improve customer service, safety and reliability of the MTA transit fleet. The network, called the NEXT System, will result in digital variable message signs located at 200 of the regions busiest bus stops that will carry real-time schedule information and tell customers when their bus will reach the stop. The NEXT System also includes a diagnostic system that monitors the mechanical condition of a bus while operating, allowing mechanics to spot a potential problem before it causes a breakdown. The MTA's current plans call for the technology to be in place by the end of 2006.

"When you ride a bus or train, you want to know things like: when is it going to get to your stop? Is it on schedule so you can get to work on time? Does the air conditioning work? These are basic questions, but they are critical to our customers," said Governor Ehrlich. "Our focus is on being able to address these questions and provide our customers with the convenient, comfortable and safe transportation they deserve. I am committed to building a transit system that works for people. The NEXT System will play a key role in our drive to reach that goal."

The NEXT System is an integrated network of the latest technological advances in transit. It uses global positioning satellite systems and wireless technology to allow

the MTA to know where each bus or train is at any given time and translate that information into real time messages that can be read by customers at a bus stop or train platform. The integrated software also allows for the latest schedule changes, voice and sign destination messages to be automatically uploaded to each bus. The same software system can provide real time passenger-count information, farebox data and updates on a vehicle's mechanical condition, allowing the maintenance team to stay ahead of problems and avoid breakdowns on the road.

"Governor Ehrlich's aggressive approach to improving our transit network will produce real and tangible benefits to our riders every day," said Transportation Secretary Robert L. Flanagan. "In addition to improving the performance and efficiency of our fleet, the NEXT System also will result in more secure transit facilities for our customers. Closed circuit security cameras will be installed at each of our Light Rail, Metro, and MARC parking lots, and at our park and ride lots. All will be monitored by police at a central control center."

A critical component of the NEXT System is its ability to monitor the performance of an engine, heating and cooling system, or wheelchair lift while a bus is on the road.

"With the NEXT System, we will be able to spot the warning signs and see a problem in the making," said MTA Administrator Robert L. Smith. "Before an engine problem causes a bus to break down on the street, the system will let us know in advance that symptoms exist that need attention. We can make the needed repairs before the engine is damaged, extend its life and save on expensive repair bills."

Over the next two years, the MTA will dedicate $76 million in state and federal funds to purchase 230 new buses equipped with the NEXT System. A majority of the existing bus fleet will be retrofitted with the NEXT System during this period as part of an additional $50-million system-wide upgrade to introduce the system across the board at MTA.

A complete list of the individual components of the NEXT System and an explanation of their function is attached.

# Individual Components of the NEXT System

## Direct Customer Service Enhancements

**Next Vehicle Arrival -** The Next Vehicle Arrival (NVA) signs are electronic message signs that will provide the public with accurate, real-time schedule information telling them when to expect their bus to arrive at the stop. They will be located at 200 key bus stops throughout the Baltimore Metro area. The NVA signs will provide the public with a tangible benefit every day while awaiting their bus ride.

**Next Train Arrival –** The Next Train Arrival signs are electronic message signs that will provide accurate real-time information about when customers can expect their train to arrive at the station. These signs not only provide information about when the train will arrive, they can be used to inform customers of delays, service changes, and public service or Homeland Security announcements. They will be located at Light Rail and MARC stations.

**Real-Time Customer Information –** The Next System incorporates a new scheduling software system that will provide customers with real-time transit and trip planning information using ADA compliant kiosks located at transit stations. Customers also can access the real-time transit information and trip-planning service through the MTA's ADA compliant web page by using home computers and wireless devices such as internet-capable cell phones, palm pilots, and other Personal Digital Assistants (PDAs). Armed with this real-time information, customers will be able to more accurately and effectively plan their travel agenda.

**Closed Circuit TV Security System –** Closed Circuit Television (CCTV) cameras will be used to enhance customer and employee safety and Homeland Security. CCTV cameras will be deployed at Light Rail, Metro & MARC parking lots and passenger stations as well as other sensitive MTA facilities.

**Public Announcement System –** The Public Announcement System will provide audio announcements at Light Rail, Metro & MARC passenger stations. Customers will receive information concerning such things as service changes, delays, and Homeland Security issues.

**Automatic Voice/Sign Annunciation** – The Automatic Voice/Sign Annunciation (AVA) system automatically announces stops and makes public service announcements. This system also includes internal message signs showing each stop announcement. The AVA provides enhanced customer information and makes the bus system much more convenient and user friendly. It allows the MTA to fulfill its obligation to provide fully ADA (Americans with Disabilities Act) compliant bus service.

## Components to Improve Overall Transit System Performance

**Automatic Vehicle Location –** The Automatic Vehicle Location (AVL) system is the heartbeat of the NEXT System. It is a tool that provides fleet management, communications management, incident management, and historical information. The AVL system integrates many existing devices into a single system, including the destination signs, the new Transit Pass farebox equipment, and the automatic vehicle monitoring and automatic announcement systems. AVL increases operator and passenger safety and enables the MTA to better manage its bus fleet and improve on-time performance.

**Automatic Passenger Counters –** Automatic Passenger Counters (APC) are sensors located at the front and rear doors of the bus. The APCs in conjunction with the on-board Computer Aided Dispatch (CAD)/AVL computer will count the number of people who get on and off the bus at each stop. This information is invaluable in determining actual ridership demand and utilization so that more realistic and cost effective scheduling of the bus service can be achieved. The data collected by the APCs will enable the MTA to better utilize resources and more efficiently deploy its existing bus service. This will allow the MTA to reduce its fleet size, yet deliver the desired level of service.

**Automatic Vehicle Monitoring –** The Automatic Vehicle Monitoring system (AVM) monitors vital diagnostic points within the bus while it is in service. This includes such things as engine temperature, oil pressure, and transmission fluid level. When a monitored status falls below a prescribed threshold, the AVM remotely notifies maintenance personnel so that corrective action can be taken, in many cases before an actual breakdown occurs. The AVM reduces maintenance costs and improves reliability and safety.

**Wireless Local Area Network** – The Wireless Local Area Network (LAN) automatically transfers data to and from the buses while they reside at their respective divisions after finishing service each day. The latest schedule, stop announcement messages, and destination sign messages as well as other data will be automatically uploaded to each bus. Similarly, data collected from the automatic passenger counters, the vehicle maintenance system, the farebox, and other systems will be downloaded. The wireless LAN improves data management and eliminates the need to manually visit each bus to accomplish the required uploads and downloads, allowing maintenance personnel to focus more time on preventive maintenance.

**Integration of Existing Systems** – The NEXT System provides the necessary integration of existing systems such as the destination signs, the new Transit Pass farebox equipment, and the vehicle monitoring and announcement systems to maximize their functionality. It enables the MTA to more effectively and efficiently provide service and information to our customers.

**Communications Control Center** – The Communications Control Center will house the CAD/AVL system. It provides an environment that enables bus supervision to efficiently and effectively monitor the location of every bus in the entire fleet as well as to receive emergency alarms and to communicate with operators and mobile supervision staff.